

Bilateral Radial Neck Fracture- Rare Case Report

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Abstract: Unilateral fracture of radial head and neck are the most commonly seen elbow fractures. These fractures occur due to fall on outstretched hand with a partially flexed elbow. However, bilateral radial neck fractures are extremely rare injury in adults and till the date only few cases has been reported. We report here an unusual case of bilateral radial neck fractures in a patient who presented with complaints of pain and mild swelling in both elbows following fall on outstretched hands. Careful physical examination and proper radiographs are mandatory for the diagnosis. Early recognition, proper management, and physical therapy are necessary for complete recovery and full functional movement of the elbows.

I. Case Report

A 34 year old male presented in emergency with complaints of pain in both elbows following a fall onto both outstretched hands. He did not have any other injury or other significant medical history. The patient reported mild swelling and painful restricted elbow and forearm movements. On examination, he had terminal restriction of flexion and extension in both elbows, however, supination and pronation movements produced significant pain and there was tenderness over the radial head region in both the elbows.

Radiographs of bilateral elbow (Fig. 1 and 2) showed bilateral radial neck fractures. The patient was treated with a bilateral above elbow posterior splint in full supination and analgesics for three weeks followed by intermittent mobilization of both elbows. At three weeks follow up arm pouch was given with intermittent mobilization. At 6 weeks follow up patient had full range of motion on left side and on right side only terminally movements were painful. At 12 weeks follow up, the patient was asymptomatic with a full range of motion in both the elbow joints.

II. Discussion

Fractures of the proximal radius are the most commonly seen elbow fractures in adults, accounting for 1.5% to 4 % of all fractures and approximately one third of all elbow fracture [1, 2]. The mechanism of injury in radial head and neck fractures is usually a fall onto an outstretched hand with a partly flexed elbow and pronated forearm causing longitudinal impact of the radius against the capitellum [3]. Fekete, Detre and Szepesides described the physiological valgus position of the elbow joint as the reason for this joint's vulnerability [4].

Our patient reported a fall onto outstretch hands with partially flexed elbow. Patients classically present with painful active and passive forearm rotational movements. Crepitus, pain and swelling of the lateral aspect of elbow are also typically present [3]. Diagnostic features such as the presence of a fracture line and a positive fat pad sign may not be obvious in all cases [5]. Mason's classification (based on the severity of radial head and neck fracture) is used clinically to formulate the type and extent of treatment [6]. In our case, the patient presented with pain on the lateral aspect of the elbow and painful forearm movements. We treated the patient with posterior slab immobilization followed by early active mobilization of the elbow with regular analgesia. Early movement is advocated for prevention of elbow stiffness. In bilateral radial neck fractures, management with slab immobilization makes day-to-day activities difficult, therefore help with these activities is highly recommended. For early mobilization displaced fractures are treated with open reduction and internal fixation. To date, there are only few reported cases on this unique presentation [2,4]. No matter how 'trivial' the mechanism of injury maybe, these fractures should be identified and managed properly for good functional outcome.

References

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Figure 1 & 2- X-ray bilateral elbow AP and lateral view showing bilateral radial neck fracture